

### **REMARKS**

By this amendment, claims 1 and 2 are amended and new claims 9-20 are added. Support for the changes to claims 1 and 2 and for new claims 9-20 can be found, *inter alia*, in original claims 1, 2 and 4 and in Examples 1-22 (pages 13-21) of the specification. Claims 3 and 4 were canceled previously. Claims 1, 2 and 5-20 are presented for further examination.

As an initial matter, the rejection of claims 1, 2, and 5-8 under 35 U.S.C. § 112, second paragraph, is believed overcome by the foregoing amendments to independent claims 1 and 2. Specifically, as suggested by the Examiner, the phrase “and Mo” in claims 1 and 2 has been changed to “or Mo.” No further correction is believed necessary. Reconsideration and withdrawal of the rejection are respectfully requested.

The rejection of claims 1, 5 and 6 under 35 U.S.C. § 102(b) over Takashi, JP 2002/220262 is respectfully traversed with respect to the amended claims.

As recited in claim 1, the invention relates to a laminated glass having an interlayer film formed between at least two transparent glass platy bodies. Functional ultra-fine particles having a diameter of not greater than 0.2 $\mu$ m are dispersed in the interlayer film, and an infrared-reflective film having a sheet resistivity ranging from 1k $\Omega/\square$  to 10G $\Omega/\square$  is formed on at least one surface of the interlayer film.

As amended, claim 1 further requires that the infrared-reflective film is (a) a single layer made of a metal, oxide or nitride having absorption and reflection in an infrared region, or (b) a laminate of five layers or less, each layer of the laminate being independently made of a metal, oxide, or nitride having absorption and reflection in an infrared region.

Takashi relates to a heat-insulating laminated glass that includes an infrared reflective film, and particularly an infrared reflective film 11 that includes a hologram 8, a color tuning film 9, and a barrier film 10. However, the

hologram 8 is formed using a photopolymer (e.g., OmniDex-352), which is not a metal, oxide or nitride layer as required by claim 1 (see, e.g., paragraphs 19-22 and 48-50). Pointedly, the infrared reflective film 11 taught by Takashi is not (a) a single layer or (b) a laminate of five layers or less, where each layer is independently made of a metal, oxide or nitride.

As noted in the Office Action, Takashi also teaches that the infrared reflective film can comprise a laminate of high and low refractive-index layers. There is no teaching or suggestion in Takashi, however, that such a laminate is limited to five layers or less, as required by claim 1. In view of the foregoing, reconsideration and withdrawal of the anticipation rejection are respectfully requested.

The rejection of claims 1, 2 and 5-8 under 35 U.S.C. § 103(a) over Fisher, US 6,911,254 in view of Muromachi, US 5,336,565 and Kondo, US 5,830,568 is respectfully traversed.

Independent claims 1 and 2 each relate to laminated glass having an interlayer film disposed between at least two transparent glass platy bodies. The laminated glass includes, in pertinent part, functional ultra-fine particles having a diameter of not greater than 0.2 $\mu$ m dispersed in the interlayer film, and an infrared-reflective film formed on at least one surface of the interlayer film.

As amended, claims 1 and 2 each require that the infrared-reflective film is (a) a single layer made of a metal, oxide or nitride, or (b) a laminate of five layers or less, each layer of the laminate being independently made of a metal, oxide, or nitride. Whether considered separately or in combination, such a laminated glass is not disclosed or suggested by the cited references.

Fisher discloses laminate glasses having infrared absorbing interlayers. The infrared absorbing interlayers of Fisher comprise lanthanum hexaboride (LaB<sub>6</sub>), which is incorporated into an infrared absorbing interlayer as particles or as a thin film. In one embodiment, lanthanum hexaboride particles, which can be optionally combined with other materials, are dispersed in a polymeric matrix. In a second embodiment, the lanthanum hexaboride can be coated on a

polymeric sheet (see abstract). Fisher does not disclose or suggest, however, an infrared absorbing layer that is either a single layer of a metal, oxide or nitride, or a laminate of five or less layers where each layer in the laminate is a metal, oxide or nitride. Notably, even in the embodiment where the lanthanum hexaboride is coated on a polymeric sheet, lanthanum hexaboride is not a metal, oxide or nitride.

Applicants note that the Office Action refers both to Examples 11 and 12 of Fisher. However, for at least the following reasons, neither of these examples anticipate or render obvious the claimed laminated glass.

In Example 11, Fisher discloses a composite interlayer that includes a first polymer layer, a multi-layer coated second polymer layer, and a third polymer layer containing lanthanum hexaboride particles. In Example 12, a composite interlayer includes a lanthanum hexaboride doped layer that is combined with a clear PVB sheet and laminated between a sheet of tinted glass and a sheet of low e glass. However, the composite interlayers of Examples 11 and 12 do not include the functional ultra-fine particles that are required by claims 1 and 2. Pointedly, the disclosed lanthanum hexaboride particles do not read upon any of the claimed functional ultra-fine particle compositions.

Even assuming *arguendo* that the Example 11 PVB layer containing LaB<sub>6</sub> were modified to also contain particles of indium tin oxide (ITO) or antimony tin oxide (ATO), there is no teaching in Fisher to incorporate into the laminate an infrared-reflective film that is (a) a single layer made of a metal, oxide or nitride, or (b) a laminate that is limited to five layers or less, much less that such an infrared-reflective film should be oriented so that it is formed on at least one surface of the interlayer film. Notably, Fisher is silent as to which surface of the solar reflective film (PET side or multilayer coating side) is formed on the PVB layer containing LaB<sub>6</sub>.

The secondary references of Muromachi and Kondo, which were cited for disclosing glasses having a particular sheet resistivity, fail to remedy the deficiencies of Fisher with respect to claims 1 and 2.

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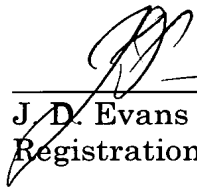
In view of the foregoing, the application is respectfully submitted to be in condition for allowance, and prompt favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #038788.57524US).

Respectfully submitted,

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